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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/757,115

01/14/2004

Steven O. Smith

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12/05/2006

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EXAMINER

NGUYEN, HIEP

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding..

## Office Action Summary

**Application No.**

10/757,115

**Applicant(s)**

SMITH ET AL.

**Examiner**

Hiep Nguyen

**Art Unit**

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-16 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-16 and 21-25 is/are allowed.
- 6) ☒ Claim(s) 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is responsive to the amendment filed on 09-26-06. Applicant's arguments with respect to 112, 2<sup>nd</sup> paragraph and reference Xu (US 6,066,985) have been carefully considered but they are not deemed to be persuasive to overcome the reference. Thus, the claims remain rejected under 112, 2<sup>nd</sup> paragraph and Xu.

#### *Specification*

The disclosure is objected to because of the following informalities: the disclosure "In precision buffer circuit 10, in some embodiments, only transistors 16, 18, and 24 are conducting signal currents. The remaining transistors--i.e., transistors 12, 14, 18, 20 and 22 are conducting only bias currents, thus operating to provide relatively constant current" in page 5, paragraph [0001] is misleading. Figure 1 of the present application show that if transistors 12, 14, 20, 22 do not conduct signal currents, transistor 16, 18 and 24 will not conduct any current also because transistors 16 and 18 are isolated from supply source (Vcc and ground). Note that because transistors 12, 16, 20 and 14, 18, 22 are connected in cascode between supply voltage (Vcc) and ground, transistors 12, 16, 20 conduct a same current and transistors 14, 18, 22 conduct a same current.

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

Claims 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claim 18, the recitation "at most three transistors operable to provide signal currents" on line 4 is indefinite because it is misdescriptive. Figure 1 of the present application shows that there are more than 3 transistors (12, 14, 16, 18, 20, 22) in the circuit that provide signal currents.

Claims 19 and 20 are indefinite because of the technical deficiencies of claim 18.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Xu (US 6,066,985). See attached paper.

Regarding claims 18-20, figure 2 of Xu shows a buffer circuit comprising an input terminal (INPUT), an output terminal (OUTP) three transistors (N105, N106, P117) wherein the output (OUTP) is feedback to two matched transistors (N105, N106), first and second current sources (P107, P108). Note that two transistors (N105, N106) are considered to be identical (matched) otherwise stated. When the input voltage decreases, the output voltage (OUTP) decreases (see abstract); transistor (N105) is turned on less, the input voltage (INPUT) increases thus the input voltage change is countered. The first and second matched current sources are transistors (P107) and (P108).

***Response to Arguments***

Applicant's arguments filed 09-26-06 have been fully considered but they are not persuasive. In the Remarks, the Applicant argues that the recitation "at most three transistors operable to provide signal currents" in claim 18 is fully supported and described in the specification, page 5, paragraph [0001]. This disclosure is misleading. Figure 1 of the present application show that if transistors 12, 14, 20, 22 do not conduct signal currents, transistor 16, 18 and 24 will not conduct any current also because transistors 16 and 18 are isolated from supply source (Vcc and ground).

***Allowable Subject Matter***

Claims 2-16 and 21-25 are allowed because the prior art of records (US 6,066,985) fails to teach or suggest a buffer circuit comprising a third transistor having a gate, a source,

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and a drain, wherein the gate of the third transistor is connected to the drain of the first transistor, wherein the source of the third transistor is connected to the output terminal and to the source of the second transistor as called for in claims 2, 7, 9, 10 and 21.

### *Conclusion*

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

11-22-06



TUANT.T.LAM  
PRIMARY EXAMINER